DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: LONESOME LAKE	Lake Area (ha): 11.01
Town: LINCOLN	Maximum depth (m): 2.6
County: Grafton	Mean depth (m): 1.2
River Basin: Merrimack	Volume (m^3) : 136500
Latitude: 44°08'24" N	Relative depth: 0.7
Longitude: 71°42'04" W	Shore configuration:
Elevation (ft): 2750	Areal water load (m/yr): 11.92
Shore length (m): 1000	Flushing rate (yr^{-1}) : 9.60
Watershed area (ha): 130.	O P retention coeff.: 0.53
% watershed ponded: 0.	O Lake type: natural

BIOLOGICAL:	18 January 1995	9 September 1994
DOM. PHYTOPLANKTON (% TOTAL) #3	SPARSE - NO DOMINANT	DINOBRYON 95%
#2		
#3		
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		2.62
DOM. ZOOPLANKTON (% TOTAL) #3	NO ZOOPLANKTON OBSERVED	COLLOTHECA 39%
#2		(ALL ZOOPLANKTON
#3		SPARSE)
ROTIFERS/LITER	<1	12
MICROCRUSTACEA/LITER	<1	19
ZOOPLANKTON ABUNDANCE (#/L)	<1	31
VASCULAR PLANT ABUNDANCE		Scat/Common
SECCHI DISK TRANSPARENCY (m)		2.6 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)	12.1	11.5
BACTERIA (E. coli, #/100 ml) #1		
#2		
#3		
#-	I	

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None Hypolimnion volume (m^3) : None Anoxic volume (m^3) : None

CHEMICAL:			LONESOME LINCOLN	LAKE	
3.17.	18 January 1995		9 September 1994		
DEPTH (m)	1.0		1.5		
pH (units)	4.7		6.1		
A.N.C. (Alkalinity)	-0.7		1.1		
NITRATE NITROGEN	0.27		0.05		
TOTAL KJELDAHL NITROGEN			< 0.10		
TOTAL PHOSPHORUS	0.007		0.007		
CONDUCTIVITY (µmhos/cm)	19.4		18.6		
APPARENT COLOR (cpu)	32		27		
MAGNESIUM			0.16		
CALCIUM			1.5		
SODIUM			0.8	1100000	
POTASSIUM			0.40		
CHLORIDE	< 2		< 2		
SULFATE	3		4		
TN : TP					
CALCITE SATURATION INDEX			5.0		

All results in mg/L unless indicated otherwise

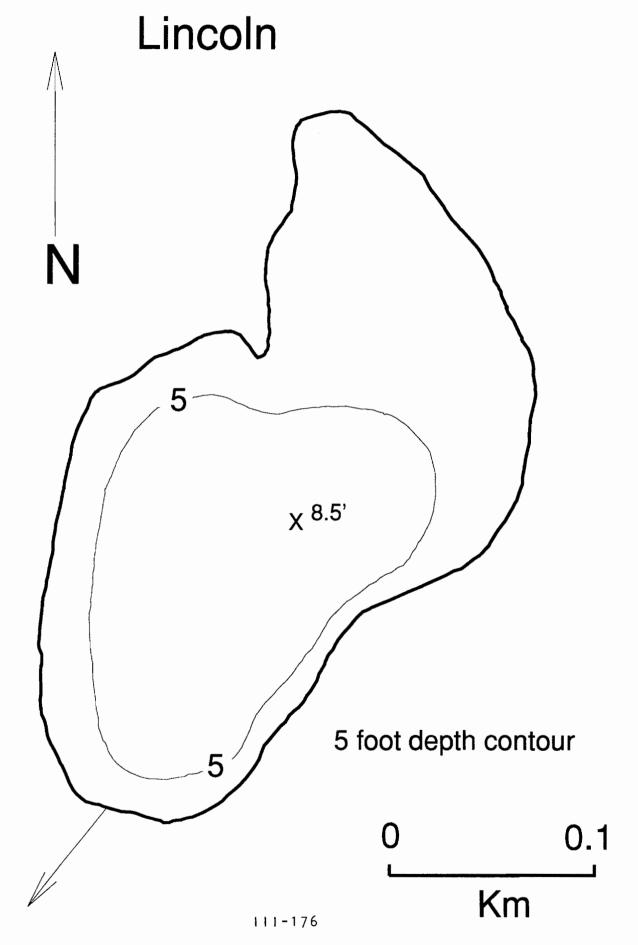
TROPHIC CLASSIFICATION: 1994

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	2	2	0	4	Oligo.

COMMENTS:

- 1. AKA Tamarack Pond and Moran Lake.
- 2. This is a remote (relatively short hike) mountain pond located in Franconia Notch State Park.
- 3. It was partially surveyed previously and classified in 1980. There was no change in classification and little change in water quality between the two dates.
- 4. It has also been sampled by helicopter during spring turnover since 1982. At that time, pH values generally ranged in the mid 5's, about halfway between the winter and summer values listed above. ANC values ranged from .5 to 1 mg/L.

Lonesome Lake



FIELD DATA SHEET

LAKE: LONESOME LAKE DATE: 09/09/94

TOWN: LINCOLN

WEATHER: PARTLY CLOUDY; WINDY

3.12.1 V37 V37 J1				
DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION	
0.1	11.5	11.3	102 %	
0.5	11.5	11.2	101 %	
1.0	11.5	11.2	101 %	
1.5	11.5	11.2	101 %	
2.0	11.5	11.5	103 %	
2.5	11.5	11.5	103 %	
		and the second s		

SECCHI DISK (m): 2.6 VOB COMMENTS:

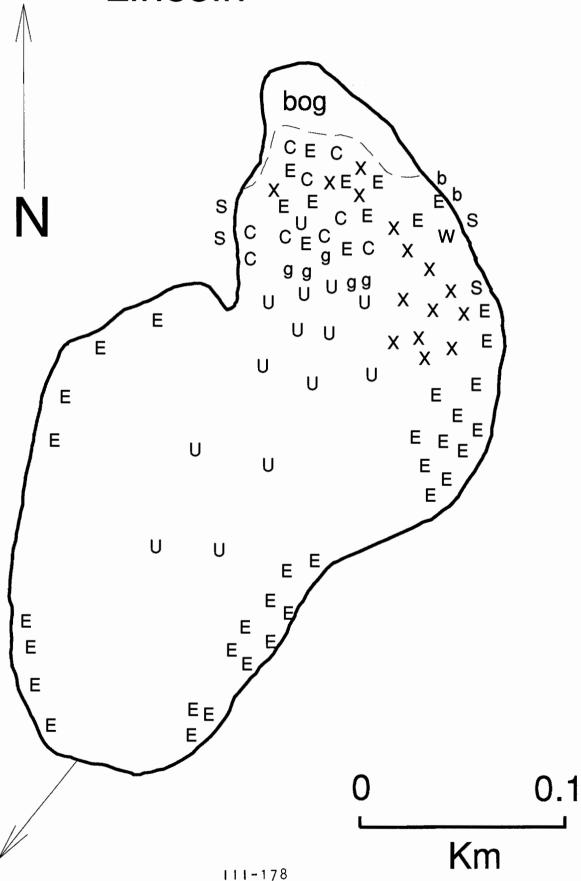
BOTTOM DEPTH (m): 2.6

TIME:

*Dissolved oxygen values are in mg/L

Lonesome Lake





AQUATIC PLANT SURVEY

DATE: 09/09/94 LAKE: LONESOME LAKE TOWN: LINCOLN PLANT NAME ABUNDANCE Key **GENERIC** COMMON Scat/Common Pipewort Eriocaulon septangulare E Bladderwort Sparse U Utricularia Sterile thread-like leaf X Sparse Bur reed Sparse S Sparganium Pondweed W Potamogeton Sparse Bulrush b Sparse Scirpus C non-flowering sedge Scattered Cyperaceae Yellow-eyed grass Sparse Xyris g

OVERALL ABUNDANCE: Scat/Common

GENERAL OBSERVATIONS:

- 1. There was a bog at the north end of the lake.
- 2. No floating bladderwort was observed; it was on the bottom at scattered locations.